

## XIII. Radioactive Materials

*Section XIII of the 1999-00 season plans lists the radioactive materials to be used and provides information regarding their form, nuclide, site, and specific use.*

<u>PROJECT</u>	<u>NUCLIDE</u>	<u>FORM</u>	<u>SITE</u>	<u>USE</u>
BO-004-O	<sup>14</sup> C <sup>3</sup> H	<sup>14</sup> C - bicarbonate <sup>3</sup> H - Leucine Thymidine	McMurdo Station	Metabolic studies of microscopic algae in permanent ice and snow
BP-016-O	<sup>14</sup> C	<sup>14</sup> C - Sodium bicarbonate	Palmer Station; R/V LAURENCE M. GOULD	Palmer Station/LM GOULD: LTER on the Antarctic Marine Ecosystem: An Ice Dominated Environment - Phytoplankton Ecology Component
BO-025-O	<sup>14</sup> C <sup>3</sup> H	<sup>14</sup> C - Bicarbonate <sup>3</sup> H - Thymidine	McMurdo Station/Dry Valleys	McMurdo Dry Valleys: A Cold Desert Ecosystem
BM-042-O	<sup>14</sup> C	<sup>14</sup> C - Sodium bicarbonate	McMurdo Station	Investigations of Dry Valley Soil Nematodes
BM-042-P	<sup>14</sup> C	<sup>14</sup> C - Bicarbonate	McMurdo Station/Dry Valleys	McMurdo Dry Valleys: A Cold Desert Ecosystem
BO-044-O	<sup>14</sup> C <sup>3</sup> H	<sup>14</sup> C - Sodium Bicarbonate <sup>3</sup> H - Thymidine <sup>3</sup> H - Leucine <sup>3</sup> H - Acetate <sup>3</sup> H - Amino Acid Mix	McMurdo Station/Dry Valleys	Metabolic studies microbial communities in the permanent ice covers on lakes in the McMurdo Dry Valleys

<u>PROJECT</u>	<u>NUCLIDE</u>	<u>FORM</u>	<u>SITE</u>	<u>USE</u>
BP-046-O	<sup>3</sup> H <sup>14</sup> C	<sup>3</sup> H - Leucine <sup>14</sup> C - Sodium Bicarbonate	R/V LAURENCE M. GOULD; R/V NATHANIEL B. PALMER	LTER: Microbiology and carbon flux
BO-200-O	<sup>3</sup> H <sup>14</sup> C	<sup>3</sup> H - Leucine <sup>3</sup> H - Thymidine <sup>3</sup> H - Uridine <sup>14</sup> C - Bicarbonate	Palmer Station	Determination of bacteria plankton response to UV radiation in the Weddell Sea and Palmer Station LTER grid.
OO-257-O	<sup>63</sup> Ni	<sup>63</sup> Ni - Foil or Plated source	South Pole Station	South Pole Monitoring for Climatic Change: U.S. Department of Commerce; National Oceanic and Atmospheric Administration, Climate Monitoring and Diagnostics Laboratory (Source is inside an electron capture detector of a gas chromatograph)
BO-267-O	<sup>3</sup> H	<sup>3</sup> H - Water	Cape Shirreff; Livingston Island	To determine the energetic costs and benefits of different foraging patterns of South Shetland Antarctic fur seals off of Cape Shirreff and Livingston Island
BO-301-O	<sup>35</sup> S <sup>14</sup> C <sup>32</sup> P <sup>33</sup> P <sup>3</sup> H	<sup>35</sup> S - Methionine <sup>14</sup> C - Amino Acids <sup>32</sup> P - Nucleic Acids <sup>33</sup> P - Nucleic Acids <sup>3</sup> H - Amino Acid	McMurdo Station	Metabolic studies of various Antarctic organisms

<u>PROJECT</u>	<u>NUCLIDE</u>	<u>FORM</u>	<u>SITE</u>	<u>USE</u>
BO-310-O	<sup>3</sup> H	<sup>3</sup> H - Thymidine	McMurdo Station	Determination of Dry Valley Lake Organisms
BO-313-O	<sup>35</sup> S	<sup>35</sup> S - Sulfur	R/V LAURENCE M. GOULD	Determination of Southern Ocean Sulfate Bacteria
SGS-NZ	<sup>192</sup> Ir	<sup>192</sup> Ir - Iridium Sealed Source	McMurdo Station	Fuel Tank Weld Testing